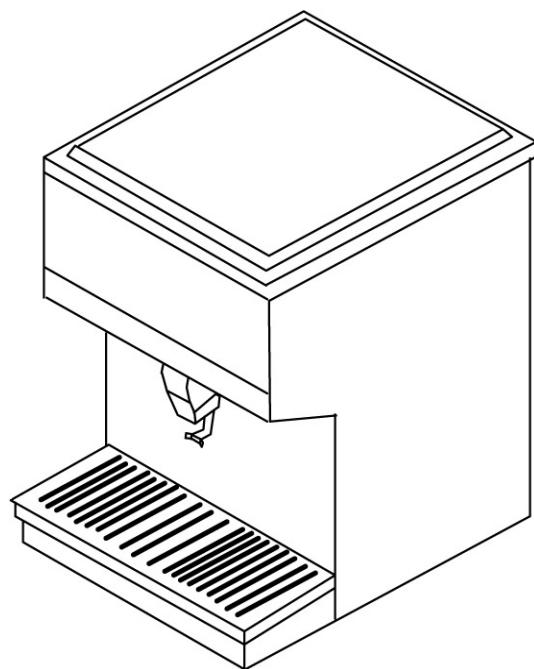


ICE DISPENSER

D45 and D90

Installation Manual



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Revision: C

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The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

This Product is warranted only as provided in Cornelius' Commercial Warrant applicable to this Product and is subject to all of the restrictions and limitations contained in the Commercial Warranty.

Cornelius will not be responsible for any repair, replacement or other service required by or loss or damage resulting from any of the following occurrences, including but not limited to, (1) other than normal and proper use and normal service conditions with respect to the Product, (2) improper voltage, (3) inadequate wiring, (4) abuse, (5) accident, (6) alteration, (7) misuse, (8) neglect, (9) unauthorized repair or the failure to utilize suitably qualified and trained persons to perform service and/or repair of the Product, (10) improper cleaning, (11) failure to follow installation, operating, cleaning or maintenance instructions, (12) use of "non-authorized" parts (i.e., parts that are not 100% compatible with the Product) which use voids the entire warranty, (13) Product parts in contact with water or the product dispensed which are adversely impacted by changes in liquid scale or chemical composition.

Contact Information:

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

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SAFETY INSTRUCTIONS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

Safety Overview

- Read and follow **ALL SAFETY INSTRUCTIONS** in this manual and any warning/caution labels on the unit (decals, labels or laminated cards).
- Read and understand **ALL** applicable OSHA (Occupational Safety and Health Administration) safety regulations before operating this unit.

Recognition



DIFFERENT TYPES OF ALERTS

DANGER:

Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death or equipment damage.

WARNING:

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.

CAUTION:

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

SAFETY TIPS

- Carefully read and follow all safety messages in this manual and safety signs on the unit.
- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls properly.
- **Do not** let anyone operate the unit without proper training. This appliance is **not** intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your unit in proper working condition and do not allow unauthorized modifications to the unit.

QUALIFIED SERVICE PERSONNEL

WARNING:

Only trained and certified electrical, plumbing and refrigeration technicians should service this unit. **ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

SAFETY PRECAUTIONS

This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

WARNING:

Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all of the power is off to the unit before any work is performed.

Failure to disconnect the power could result in serious injury, death or equipment damage.

CAUTION:

Always be sure to keep area around the unit clean and free of clutter. Failure to keep this area clean may result in injury or equipment damage.

SHIPPING AND STORAGE

CAUTION:

Before shipping, storing, or relocating the unit, the unit must be sanitized and all sanitizing solution must be drained from the system. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the unit to freeze resulting in damage to internal components.

MOUNTING IN OR ON A COUNTER

WARNING:

When installing the unit in or on a counter top, the counter must be able to support a weight in excess of **115 lbs for D45 and 200 lbs for D90** to insure adequate support for the unit. **FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

NOTE:Many units incorporate the use of additional equipment such as icemakers. When any addition equipment is used you must check with the equipment manufacturer to determine the additional weight the counter will need to support to ensure a safe installation.

ICE DISPENSER SAFETY PRECAUTIONS

**WARNING:**

Disconnect power to the dispenser before servicing or cleaning.

Failure to disconnect the power could result in serious injury, death or equipment damage.

**WARNING:**

Never place hands inside of hopper or gate area without disconnecting power to the dispenser. **Agitator rotation occurs automatically when dispenser is energized!**

This ice dispenser has been specifically designed to provide protection against personal injury and eliminates contamination of ice. **To ensure continued protection and sanitation, observe the following:**

**CAUTION:**

Be sure removable lid is properly installed to prevent unauthorized access to the hopper interior and possible contamination of the ice.

**CAUTION:**

Be sure the upper and lower front panels are securely fastened.

**CAUTION:**

Keep area around the dispenser clean of ice cubes.

**CAUTION:**

Dispenser cannot be used with crushed or flaked ice. Use of bagged ice that has frozen into large chunks can void warranty. The dispenser agitator is not designed to be an ice crusher. Use of large chunks of ice that "jam up" inside the hopper will cause failure of the agitator motor and damage to the hopper. If bagged ice is used, it must be carefully and completely broken into small, cube-sized pieces before filling into the dispenser hopper.



DESCRIPTION

The D45 or D90 ice dispensers solve your ice and beverage service needs in a sanitary, space saving, economical way. Designed to be manually filled with ice from any remote ice-making source, these dispensers will dispense cubes (up to 1-1/4" inch size), cubelets and hard-chipped or cracked ice.

Table 1. Specifications

Model	D45
Ice Storage:	45 pounds
Electrical:	120/1/60, 3 Amps
Drain Connection	3/4" FPT
Electrical Connection	6" 3-Wire Cord with 3-Prong Ground Type Plug
Dimensions:	16" W x 22" D x 28"H (40.6 cm W x 55.9 cm D x 71 cm H)
Model:	D90
Ice Storage:	90 pounds
Electrical:	120/1/60, 3 Amps
Drain Connection	3/4" FPT
Electrical Connection:	6" 3-Wire Cord with 3-Prong Ground Type Plug
Dimensions:	16" W x 28" D x 32"H (40.6 cm W x 71 cm D x 81.3 cm H)

INSTALLATION INSTRUCTIONS

1. Locate the dispenser indoors on a level counter top. Unpack the four (4) legs and install them into the threaded holes provided in the bottom of the unit.
2. Connect the 3/4"IPS (or equal) drain line to the 3/4"threaded drain connections at the lower rear of the unit. This line must pitch downward to an open drain and must contain no traps, or improper drainage will result.
3. Clean the hopper interior. (See Cleaning Instructions on page 3.)
4. Connect the power cord to a 120 volt, 60 hertz, 3-wire grounded receptacle. All electrical wiring must conform to national and local electrical codes.

CLEANING INSTRUCTIONS



WARNING:

DISCONNECT POWER BEFORE CLEANING! Do not use metal scrapers, sharp objects or abrasives on the ice storage hopper, top cover and the agitator disk, as damage may result. Do not use solvents or other cleaning agents, as they may attack the plastic material.

DISPENSER

1. Clean the ice dispenser interior at least once a month.
2. Lift off agitator assembly and wash and rinse it thoroughly.
3. Wash down the inside of the hopper and top cover with a **mild** detergent solution and **rinse** thoroughly to remove all traces of detergent.
4. Replace the agitator.
5. Sanitize the inside of the hopper and agitator with a solution of 1 ounce of household bleach in 2 gallons of water.
6. Remove ice chute cover as follows:
 - A. Flex sides outward to disengage lower pins.
 - B. Lift ice chute cover to disengage upper pins.
 - C. Lower ice chute cover down out of unit.

NOTE: It may be helpful to twist cover slightly.

7. Clean the inside of the ice chute and ice chute cover with a mild detergent solution and rinse thoroughly to remove all traces of detergent.
8. Sanitize as described in Step 5.
9. Reverse steps above to reassemble ice chute.



OPERATING INSTRUCTIONS

Fill the hopper with ice and replace the lid. Pushing the dispenser lever will cause ice to flow from the ice chute. Ice flow will continue until the lever is released. If ice does not dispense, see the TROUBLESHOOTING GUIDE to find the cause.

NOTE: Use caution to avoid spilling ice when filling dispenser. Immediately clean up any spilled ice from filling or operating the unit. To prevent contamination of ice, the lid must be installed on the unit at all times.



MAINTENANCE

The following dispenser maintenance should be performed at the intervals indicated:

CLEANING

DAILY (OR AS REQUIRED)

Remove foreign material from the vending area sink to prevent drain blockage.

WEEKLY (OR AS REQUIRED)

Clean the vending area. Check for proper water drainage from the vending area sink.

MONTHLY

Clean and sanitize the hopper interior. (See CLEANING INSTRUCTIONS.)

If the dispenser fails to dispense ice when operated, check that the hopper has ice in it and that power is being supplied to the unit. If the problem persists, check the following:

1. Determine if the agitator is rotating (check for the sound of ice movement in the hopper).
2. Observe whether the gate is operating.

After checking the above, refer to the TROUBLESHOOTING GUIDE for possible problem causes and corrective action.

TROUBLESHOOTING GUIDE

Should your unit fail to operate properly, check that there is power to the unit and that the hopper contains ice. If the unit still does not dispense, check the following chart under the appropriate symptoms to aid in locating the defect.

Trouble	Probable Cause	Remedy
BLOWN FUSE OR CIRCUIT-BREAKER.	A. Short circuit in wiring. B. Defective gate solenoid. C. Defective agitator motor.	A. Repair wiring. B. Replace gate solenoid. C. Replace agitator motor.
GATE DOES NOT OPEN. AGITATOR DOES NOT TURN.	A. No power. B. Bent depressor plate (does not actuate switch). C. Defective dispensing switch.	A. Restore power. B. Replace depressor plate. C. Replace dispensing switch.
GATE DOES NOT OPEN OR IS SLUGGISH. AGITATOR TURNS.	A. Defective gate solenoid B. Weak gate spring. C. Excessive pressure against gate slide.	A. Replace gate solenoid. B. Replace gate spring. C. Reduce pressure against gate slide.
GATE OPENS. AGITATOR DOES NOT TURN.	A. Ice solidified in hopper. B. Defective agitator motor. C. Defective capacitor (D90 only).	A. Break up ice in hopper. B. Replace agitator motor. C. Replace capacitor.
ICE DISPENSES CONTINUOUSLY.	A. Stuck or bent depressor plate (does not release switch) B. Defective dispensing switch C. Improper switch installation.	A. Replace depressor plate. B. Replace dispensing switch. C. Properly install switch.
SLUSHY ICE. WATER IN HOPPER.	A. Blocked drain. B. Unit not level. C. Poor ice quality due to water quality or ice maker problems.	A. Open drain. B. Level unit. C. Clean hopper, then replace ice.

MOUNTING TEMPLATES

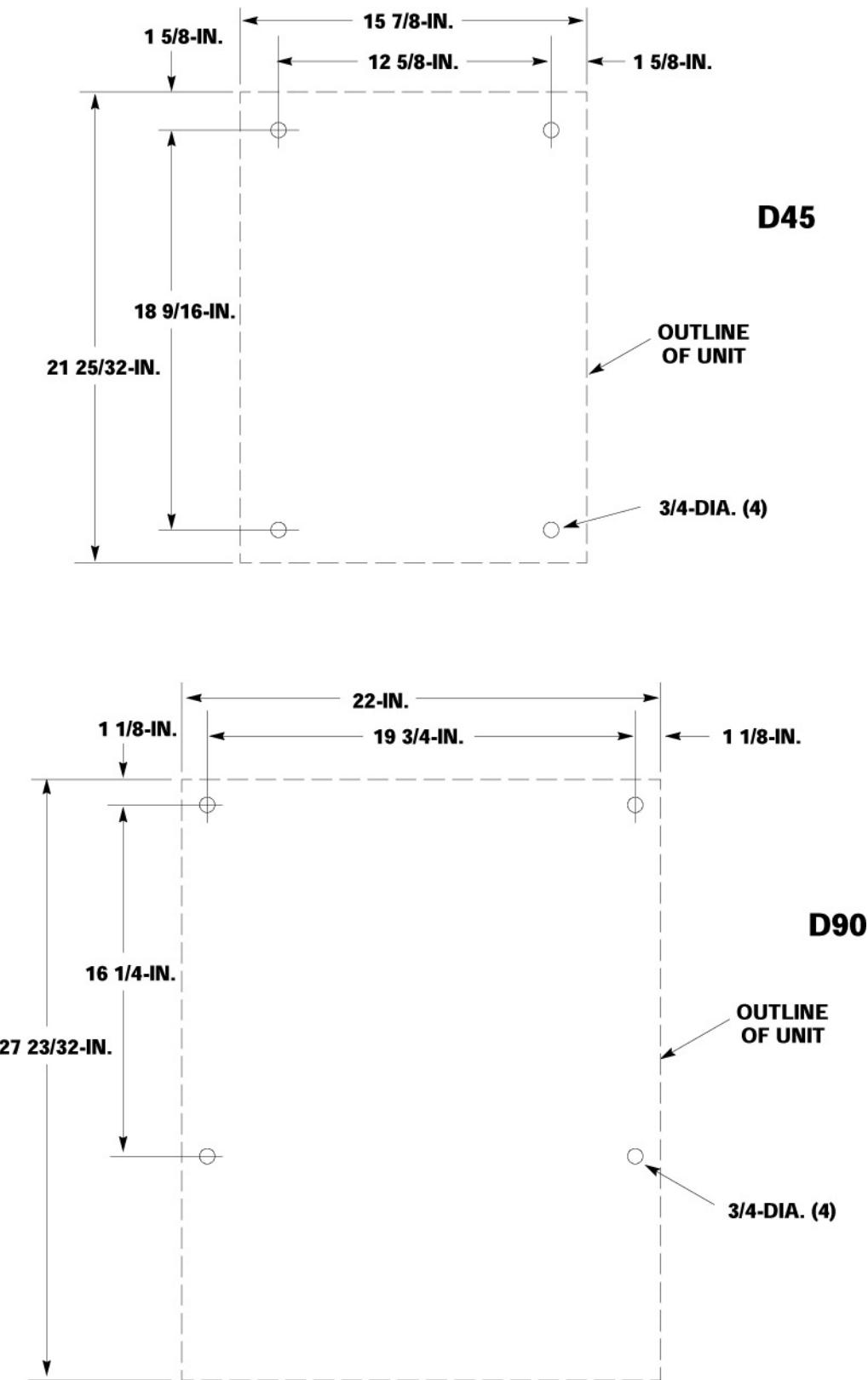


Figure 1.

WIRING DIAGRAM

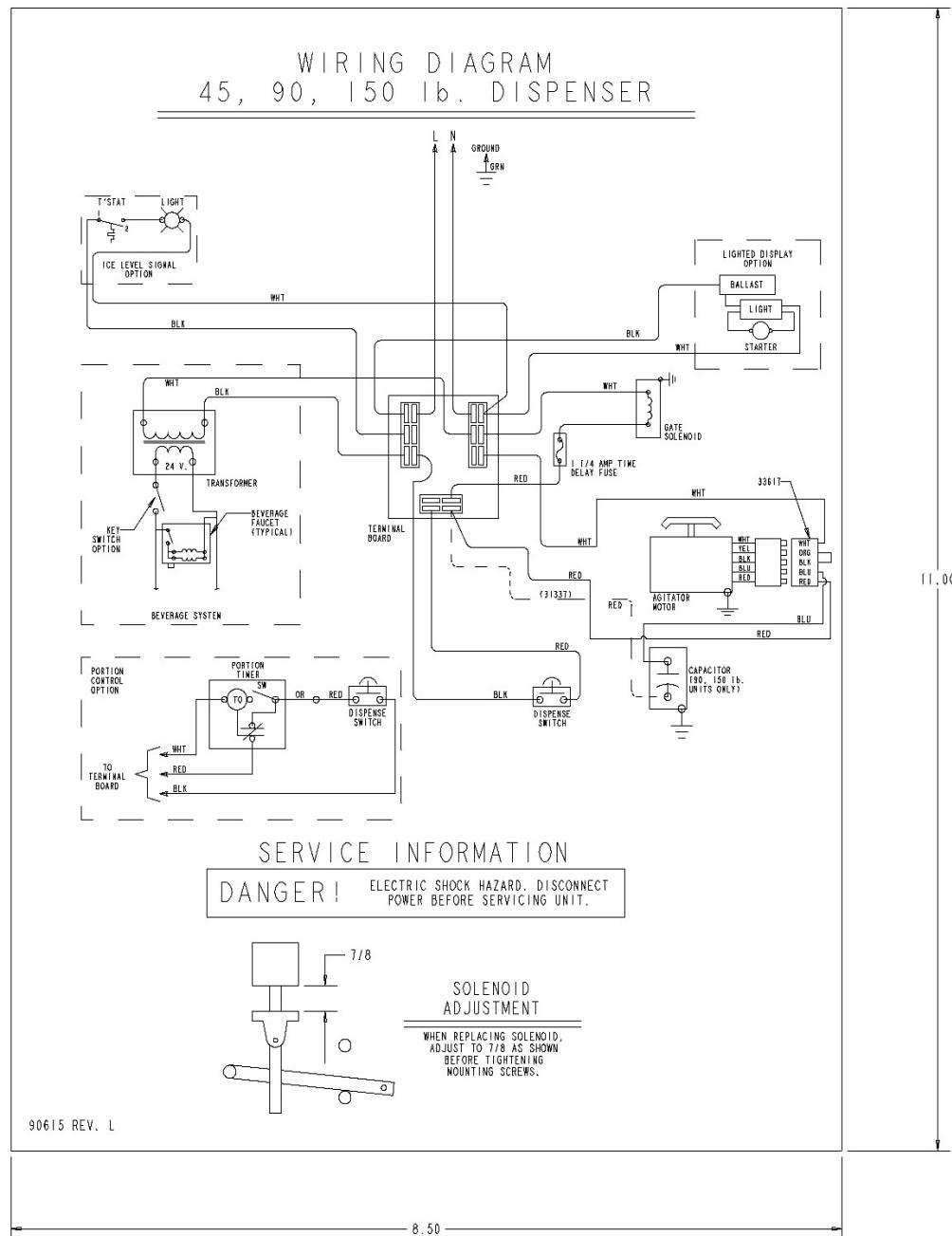


Figure 2.

SOLENOID ASSEMBLY-EXPLODED VIEW AND PARTS LIST

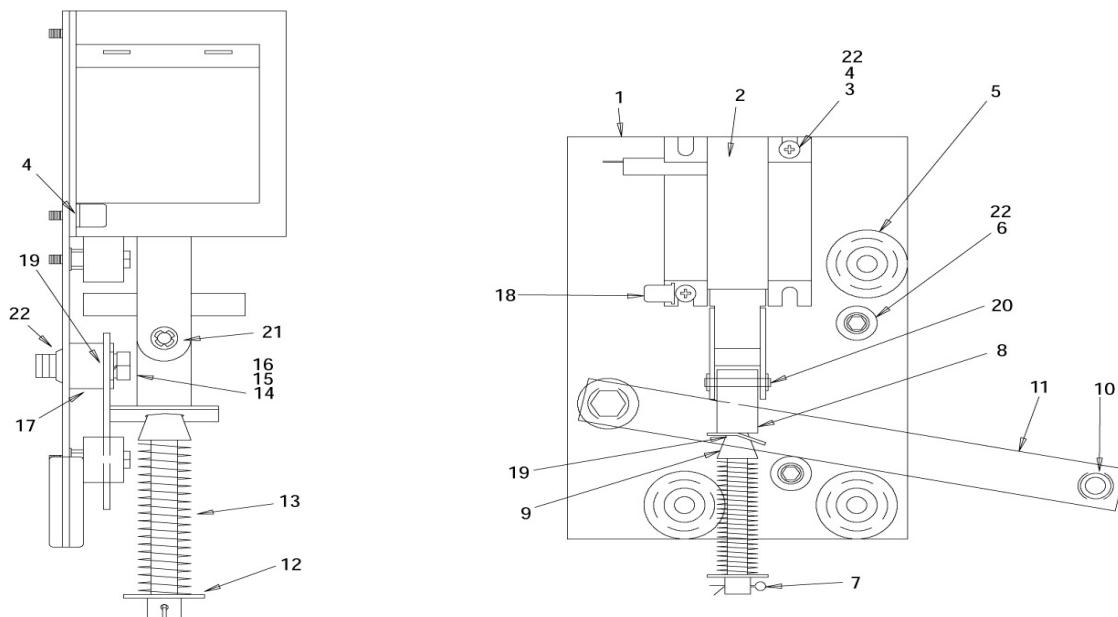


Figure 3.

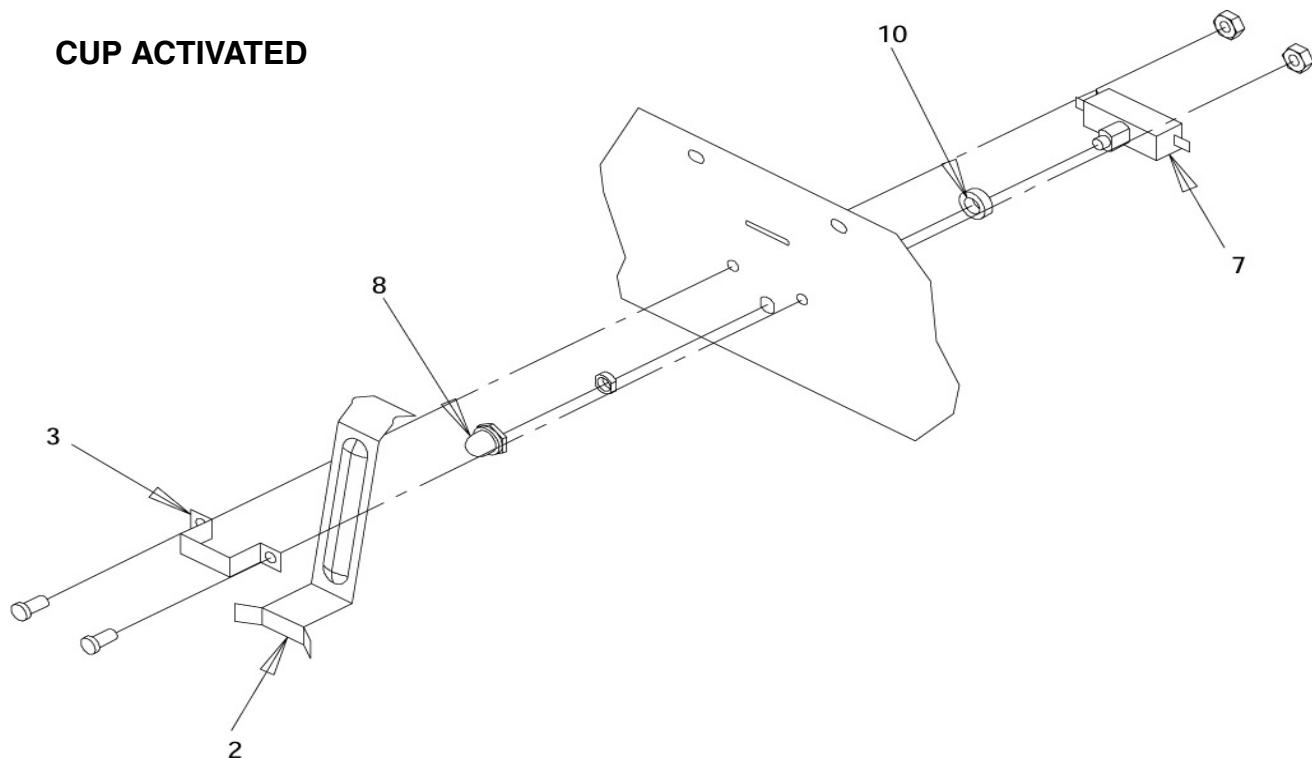
Index No.	Part No.	Qty.	Name
1	21493	1	Solenoid Mounting Plate
2#	31551	1	Solenoid Service Kit
3	70171	2	8-32 x 3/8 Phil Tr HD Screw
4	70121	2	No. 8 Lockwasher
5	50752	3	Isolator
6*	50789	2	Bumper Assembly
7*	70423	1	Cotter Pin
8*	10080	1	Gate Lift Rod
9	10081	1	Gate Lift Rod Bushing
10	50754	1	Gate Arm Bearing
11	21492	1	Gate Lift Arm
12	70043	1	Flatwashe
13*	70422	1	Spring
14	70263	1	1/4-20 x 3/4 Hex Hd Screw
15	70048	1	1/4 Lockwasher
16	70066	1	1/4 Flatwasher
17	10077	1	Pivot Bearing
18	30227	1	1/4 Quick Connect Tab
19	50305	--	Lubricant
20*	21592	1	Solenoid Linkage Pin
21*	70433	2	Retainer Ring
22	51088	--	Loctite
--*	70438	--	Rebuilding Kit

NOTE: * Parts Supplied with rebuilding kit.

31551 solenoid Supplied with items 20 & 21.

DISPENSING LEVERS AND SWITCHES

CUP ACTIVATED



PUSH LEVER

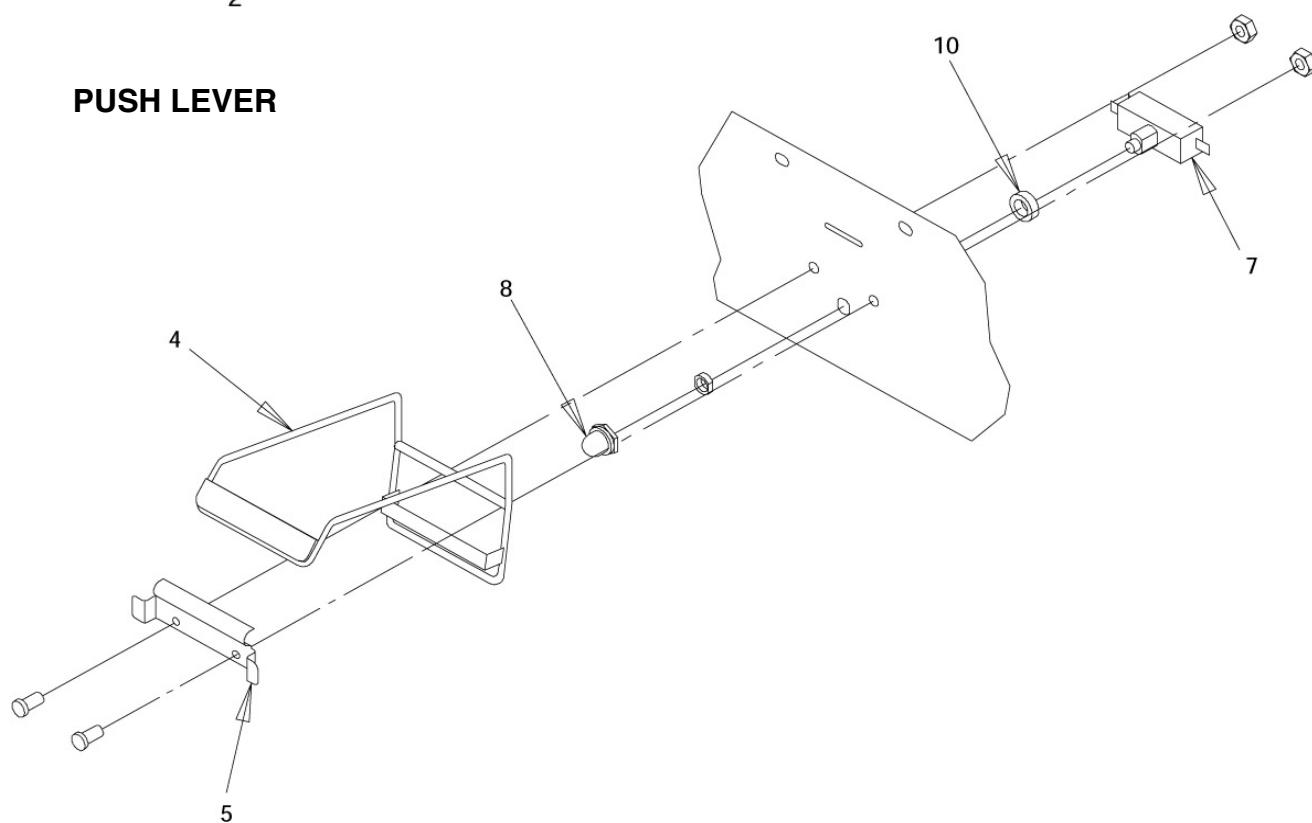


Figure 4.



PARTS LIST

Item	Description	Part No. D45	Part No. D90
1	Gate Slide	21491	21491
2	Depressor, Cup Activated	21515	21515
3	Depressor Retainer (for 21515)	22644	22644
4	Depressor Push Lever	27126	27126
5	Depressor Retainer (for 27126)	27107	27107
6	Agitator	21517	21629
7	Dispense Switch	30895	30895
8	Switch Boot	31007	31007
10	Foam Shield	23062	23062
11	Agitator Motor	629097027	31112-1
12	Motor Shaft Seal	50454	50454
13	Motor Gasket	50481	50481
14	Lid	50748	50791
15	Sink	50750	50793
16	Ice Chute, Back Section	53015	53015
17	Ice Chute Cover	53016	53016
18	Gate Gasket	51891	51891
19	Sink Grill	70426	70441
20	Leg	70419	70419
21	Cleaning Label	90295	90295
22	Wiring Diagram	90615	90788
23	Front Label	91559	91560
24	Capacitor	-----	30774
25	Solenoid Assembly (see page 7)	31093	31093
26	Rebuilding Kit (see page 7)	70438	70438



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